



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,493	07/13/2004	Bert C. Wong	AD6855USPCT	8269

7590 06/16/2005

E I du Pont de Nemours & Company
Legal Patents
Wilmington, DE 19898

EXAMINER

HUANG, MEI QI

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/501,493

Applicant(s)

WONG ET AL.

Examiner

Mei Q. Huang

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The terms "small laminate article" in claim 1 is a relative term which renders the claim indefinite. The term "small laminate article" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/501,491 in view of Gutweiler (US Patent 5,573,842) and further in view of Shohi et al. (EP-1036775 A1).

The instant claim directs to a laminate article comprising a plasticized PVB resin interlayer. This interlayer's PVB composition is seen to have the same components as identified in the claim 1 of the copending application. The copending application claim 1 only directs to a plasticized PVB composition.

The prior art to Gutweiler relates to a plasticized PVB film comprising a plasticizer, PVB, and an optical brightener in an amount effective to improve the optical properties and reduce the yellowing of the film which is useful as intermediate film in multilayer laminated glass panes (Abstract). A PVB having a content of vinyl alcohol monomer units of 20.5% by weight is used in Examples 1-5, see column 4, lines 64-67. Plasticizer's usage of 23-30 wt% is shown at column 4, lines 1-3. The yellowness index of less than 2 is shown at column 8, lines 4-5. Extrusion temperature of 140-250° C can be seen at column 4, lines 10-12. The end-use of the PVB laminated films including various articles is disclosed at column 4, lines 38-50. The difference of the prior art and the instant claim is that Gutweiler does not teach the use of a surfactant.

The prior art to Shohi et al. provides an interlayer film for laminated glass containing PVB resin (Abstract and page 3, [0016]). Shohi et al. teach that a surfactant among other additives, such as ultraviolet absorbers, light stabilizers, oxidation inhibitor, surfactant, colorant and so on, is conventionally incorporated in an interlayer film for

Art Unit: 1713

laminated glass of this kind (page 4, [0033]). Therefore, it would have been obvious to those skilled in the art to make a laminated article, as taught by Gutweiler, using the copending application's PVB composition incorporating a surfactant, as taught by Shohi et al., because finding an applicability for a same plasticized PVB composition, as taught by Gutweiler, is well within the reach of a person skilled in the art and including a surfactant is a common practice in the art, as clearly stated by Shohi et al.

As to the limitation of "laminated article having high curvature", as discussed above, given the substantial identity in the plasticized PVB composition between the copending application prior art and the present application, it is the examiner's position to believe that the copending application composition must inherently possess the same curvature characteristics. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596, (CCPA 1980).

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1713

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gutweiler (US Patent 5,573,842) in view of Shohi et al. (EP-1036775 A1).

The prior art to Gutweiler relates to a plasticized PVB film comprising a plasticizer, PVB, and an optical brightener in an amount effective to improve the optical properties and reduce the yellowing of the film which is useful as an intermediate film in multilayer laminated glass panes (Abstract). A PVB having a content of vinyl alcohol monomer units of 20.5% by weight is used in Examples 1-5, see column 4, lines 64-67. Plasticizer's usage of 23-30 wt% is shown at column 4, lines 1-3. The yellowness index of less than 2 is shown at column 8, lines 4-5. Extrusion temperature of 140-250° C can be seen at column 4, lines 11-12. The end-use of the PVB laminated films including various articles is disclosed at column 4, lines 38-50. The difference of the prior art and the instant claim is that Gutweiler does not teach the use of a surfactant.

The prior art to Shohi et al. provides an interlayer film for laminated glass containing PVB resin (Abstract and page 3, [0016]). Shohi et al. teach that a surfactant among other additives, such as ultraviolet absorbers, light stabilizers, oxidation inhibitor, surfactant, colorant and so on, is conventionally incorporated in an interlayer film for

Art Unit: 1713

laminated glass of this kind (page 4, [0033]). A surfactant is conventionally used in the art as clearly stated by Shohi et al. Therefore, it would have been obvious to those skilled in the art to employ such surfactant in the Gutweiler's plasticized PVB composition, motivated by a reasonable expectation of successfully obtaining the corresponding interlayer film containing PVB for laminated glass.

As to the limitation of "laminated article having high curvature", as discussed above, given the substantial identity in the plasticized PVB composition, which can be used to make a laminated article, between the copending application prior art and the present application, it is the examiner's position to believe that the copending application composition must inherently possess the same curvature characteristics. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596, (CCPA 1980).

9. Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gutweiler (US Patent 5,573,842) and Shohi et al. (EP-1036775 A1) as applied to claim 1 above, and further in view of Degeilh et al. (US Patent 5,187,217).

The prior arts to Gutweiler and Shohi et al. are adequately presented in paragraph 8 previously in this Office Action and is incorporated herein by reference.

As to claim 2, Gutweiler is silent as to including a surfactant in the plasticized PVB composition. Shohi et al. teach the use of a surfactant but do not disclose a specific one.

The prior art to Degeilh et al. relates a process of making a plasticized polyvinyl butyral (PVB) particularly used for gluing a base onto glazings. The polyvinyl butyral is obtained by the reaction of a polyvinyl alcohol with a quantity of aldehyde such that the level of hydroxylation of the polyvinyl butyral obtained is between 22 and 26%, with the reaction taking place in the presence of an acid catalyst and an emulsifier (i.e. surfactant), such as sodium dioctyl sulfosuccinate (i.e. DOSS), see column 1, lines 39-50. The amount of plasticizer used in the polyvinyl butyral resin is disclosed as 20-25 by parts per 100 parts of resin at column 2, lines 15-18.

In light of Degeilh et al.'s teaching of use a DOSS surfactant, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate such surfactant in Gutweiler's plasticized composition because Shohi et al. clearly stated that a surfactant is conventionally incorporated in an interlayer film for laminated glass of this kind (page 4, [0033]) and Degeilh et al. have successfully exemplified such common practice.

In regard to claim 3, Gutweiler's teaching of use of a brightener to improve the optical property including reduced yellowing index for the plasticized PVB laminate (Abstract, column 2, lines 42-67, and column 8, lines 4-5) reads on the instant claim 3.

In regard to claim 4, notice that sodium dioctyl sulfosuccinate, i.e. DOSS, is used as an emulsifier by Degeilh et al. (column 1, line 49), which reads on the instant claim 4.

Even though Degeilh et al. do not specify that DOSS is used as a bleach agent, such functionality must be inherently processed by this compound. Finding a new property of the compound and such a discovery does not constitute a new invention. The courts have held that the fact that a characteristic is a necessary feature or result of a prior-art embodiment is enough for inherent anticipation, event if that fact was unknown at the time of the prior invention. *In Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1320, 69 USPQ2d 1584, 1590 (Fed. Cir. 2004);); and *In Atlas Powder Co. v. Ireco, Inc.*, 190 F.3d 1342, 1348-49 (Fed. Cir. 1999).

As to claims 5-6, Gutweiler's plasticized PVB film has a thickness of 0.2-2 mm, see column 4, line 7.

As to claim 7, Gutweiler discloses the end-use of the PVB laminated films including aircraft glass panes at column 4, line 45.

As to claim 8, Shohi et al. disclose a typical method of making a PVB laminated glass comprising interposing the interlayer film between a pair of transparent glass sheets, placing the assembly in a rubber bag, carrying out preliminary bonding at a temperature of about 70-110° C under reduced pressure and performing post-bonding in an oven at a temperature of about 120-150° C and a pressure of about 10-15 kg/cm² (i.e. 142-213 psi) to provide the objective laminated glass, see page 5, [0044].

Conclusion

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure. The following references have been cited to show the state of the art with respect to the study of PVB laminated glass.

US Patent 4,035,549 to Kennar

US Patent 4,696,971 to Degeilh

US Patent 4,937,147 to Cartier et al.

US Patent 5,013,779 to Fariss et al.

US Patent 5,322,875 to Dages

US Patent 5,766,755 to Chaussade et al.

US Patent 6,673,456 to Kobata et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mei Q. Huang whose telephone number is (571) 272-3549. The examiner can normally be reached on 8am - 4pm, Mon. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1713

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mei Q. Huang
Examiner

June 10, 2005



DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700